CONSOLIDATED NMOS

Tracking Data Acquisition & Communications (TDAC)
Service Level Agreement (SLA)

Status - Update

Bill Watson
April 4, 1996
July 10, 1996

TDAC SLA

- Team Members
  - **Tom Butler, 540**
  - **Betsy Edwards, 532**
  - **Bobby Flowers, 823**
  - **Ray Lee, CSC SEAS**
  - **John Lynch, 553**
  - **Jim Rash, 520**
  - **Verna Reamy, ATSC NMOS**
  - **Harry Schenk, ATSC NMOS**
  - **Tom Taylor, 832**
  - **Mike Tong, 522**
  - **Bill Watson, 530**

TDAC Management
- **Tom Butler, 540**
- **Steve Currier, 833**
- **Brian Gioannini, 530**
- **Roger Flaherty, 532**
- **Bill Watson, 530**

- Service Scope
  - **Space Network**
    - **Cacique, Danzante, GRTS, NCC DS**
  - **Ground Networks**
    - **800: WOTS, TOTS, MGS, Radars, WATRS**
    - **500: MIL, PDL, BDA, GNSS, MOSA**
  - **Communications**
    - **NASCOM**

TDAC SLA

- **Services**

  -**Operations Management**

    >**Scheduling**
    >**Accounting**
    >**Network Integration**
    >**Fault Isolation**
    >**Operational Readiness**

  -**Radio Frequency and Data Services**

    >**Commanding**
    >**Data Acquisition**
    >**Tracking**
      -**Radiometric**
      -**Radar**

    >**Spacecraft Operations**

  -**Communications**

    >**Data Transport (from source to destination)**
    >**Voice**
    >**Video**

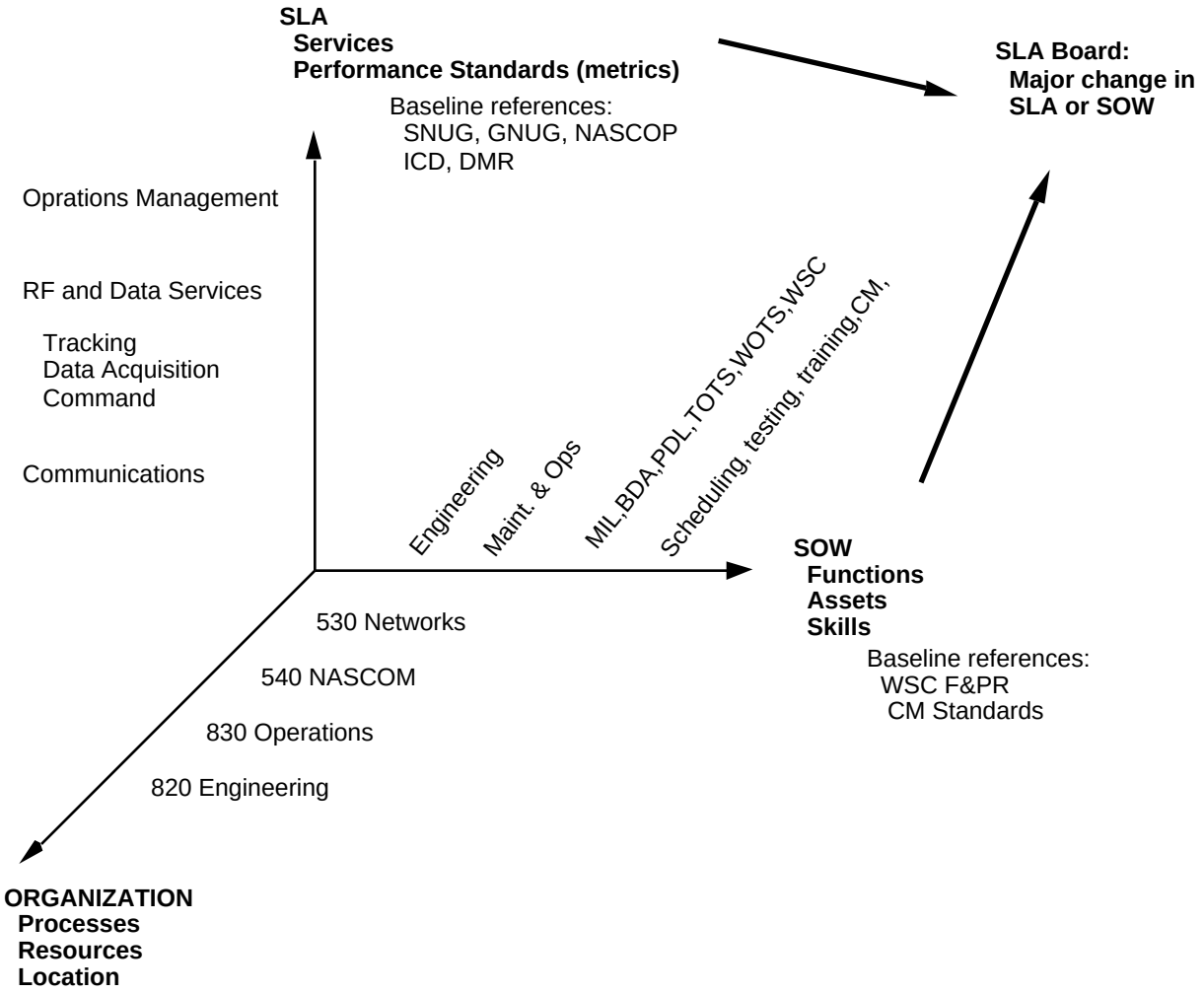
TDAC SLA

- **Working Relationship for TDAC SLA**
  - **Need to define local or delegated authority**
    > TDAC SLA NASA Management Plan - DRAFT 6/5/96
  - **Need to establish reporting or monitoring roles**
    > CNMOS SLA#2 Performance Evaluation for June
  - **Metrics roll up to a higher level; but without masking performance of small services - need to call out lower level metrics and weighting scheme**

- **Working Relationship Between SLA - SOW - Organization**
  - **SLA: Services and quality (metrics)**
  - **SOW: Functions and assets**
  - **Organization: Processes and resources (systems, facilities, budget)**

TDAC SLA

Consolidated NMOS - Service Level Agreement for Tracking and Data Acquisition and Communication (TDAC)



TDAC SLA

- **Civil Service Roles**

Under the CNMOS contract, direction may only be given to the contractor by the SLA or GSA TAO.

This does not imply that other Civil Servants can not speak to the contractors. On the contrary, the C.S. will have to speak to the contractors concerning projects for which the C.S. is responsible.

The C.S. will be allowed to conduct project meetings for the purpose of information exchange and status reporting. The C.S. should be careful not to provide direction in those meetings, but suggestions as to alternatives to consider can be made.

Remember, though, that the contractors have the right to reject the suggestions and the C.S. can not penalize them for doing so.

If the C.S. feels that the work being performed by the contractor needs to be changed, or that new work needs to be added to the contract, the C.S. shall provide the details of the changed or new work to the SLA or GSA owner.

TDAC SLA

- **Civil Service Roles - continued**

The NASA line organization will maintain the appropriate technical knowledge in order to monitor the contractor's performance quality and delivery of services.

The NASA responsibility is for insight into the services, not oversight of or direction to the contractor.

Designated members of the NASA line organization will maintain cognizance of key performance quality parameters and will provide information to the Deputy or SLA owner, as requested.

The line organization has the responsibility to report to the Deputy or SLA owner after periods of non-routine support, when the normal metrics are waived.

TDAC SLA

- **Suggested Metrics**

  - **Proficiency** = $\frac{\text{Scheduled Time - Time lost (ops errors \& equipement failures)}}{\text{Scheduled Time}}$

    Issue: 24 hours of IUE support vs. 7 minutes of STS launch support

  - **Systems Availability** = $\frac{\text{Time system is "up"}}{\text{Total time in evaluation period}}$

    - **Common Carrier**
    - **SN,GN**

    Issues: Burn-out in October 1977
    Prime Strings vs. backup strings

  - **Customer Satisfaction = Algorithm TBD = F(access, quality, responsiveness,...)**

    Issues: Possibly use monthly surveys?

    Sample: Access Satisfaction = $\frac{\text{Events Scheduled}}{\text{Events Requested (weight by priority)}}$

Note: Most metrics are available today, it will be up to the SLA Manager to propose collection methods (today's methods or new methods) and the SLA Owner to accept or negotiate alternative. Ultimately metrics must be results oriented.

TDAC SLA

- **Next Steps:**

-Complete TDAC SLA

Schedule: When do we need a negotiated SLA in-place?

> Identify Deputy
> Obtain training
> Write region or domain service, reports, metrics needed
> Develop in-house cost estimate
> Negotiate services, reports, metrics and price

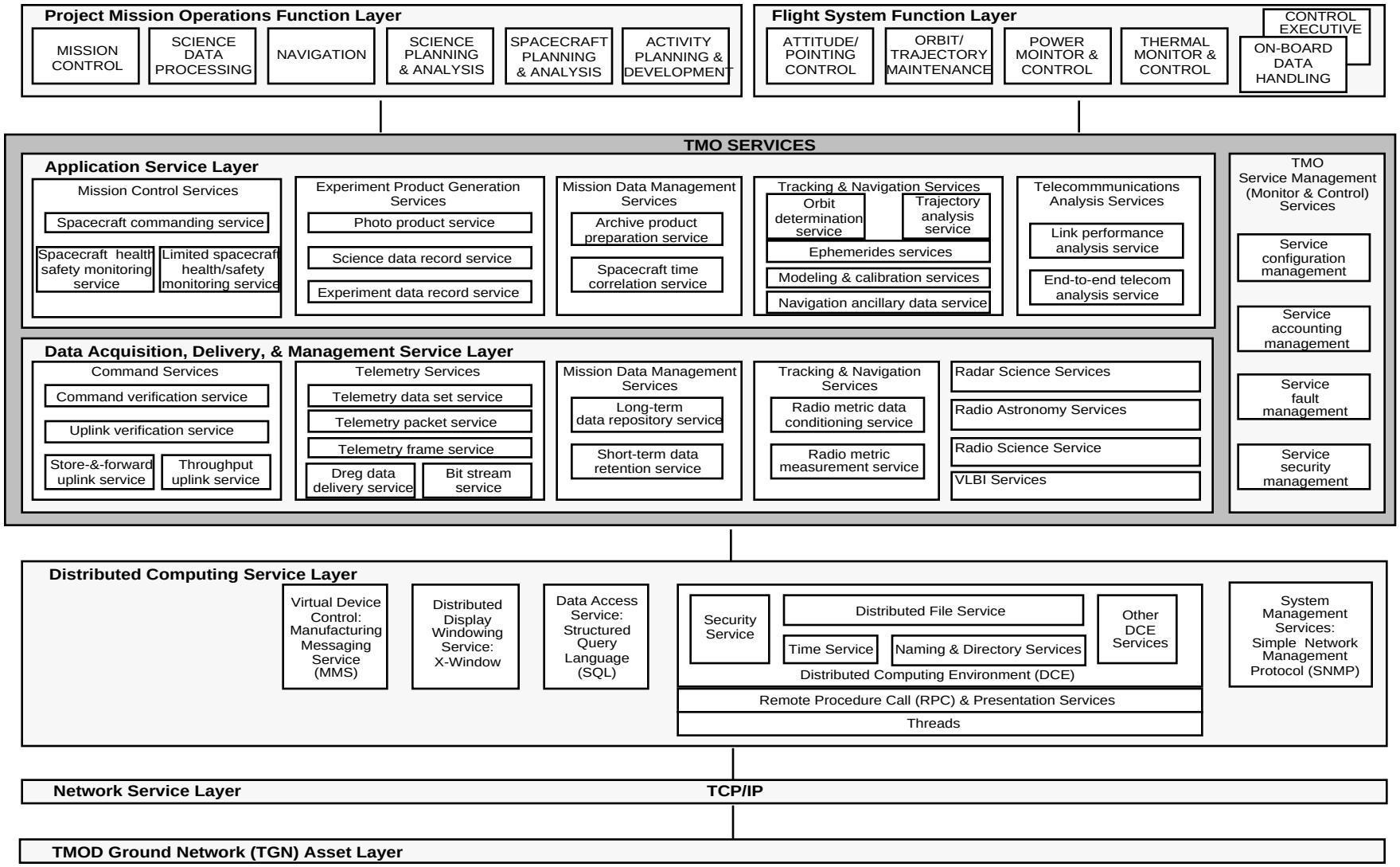
- Develop NASA TDAC SLA Management Plan to address:

> authority and organization relationship
> direction and information flow process
> metric collection and management process
> region or domain deputy roles
> reqired reports and NASA monitor roles

- Modify:

> Performance Evaluation Plan
> or Revoke Operations Procedures Documents
> NASA CS position descriptions and performance plans

TMOD SERVICE SYSTEM - LAYERED VIEW



3/8/1996
Draft V.3 W. TAI

TDAC SLA

SAMPLE From TDAC SLA

2.1 Operations Management services

The Operations Management service encompasses TDAC planning, testing, procedures development, training (simulation, certification), resource allocation (scheduling), operations direction, performance evaluation, and reporting in support of missions.

The contractor shall provide cost and resource management and control of the tracking, data acquisition, and communication services of the Spaceflight Tracking and Data Network (STDN), including schedule, status, cost, and performance reports.

Facilities and services included are described below:

Facilities	Services
White Sands Complex (WSC)	Continuous
Network Control Center (NCC)	Continuous
Bermuda tracking station (BDA)	40 hours/week
Merritt Island, Florida tracking station (MIL)	80 hours/week
Ponce de Leon, Florida tracking station (PDL)	40 hours/week
Wallops Orbital Tracking Station (WOTS)	Continuous
Wallops Transportable Orbital Tracking Stations 1, 2, and 3 (TOTS)	40 hours/week
Wallops McMurdo station	Continuous
WFF Range Instrumentation	
Nascom	Continuous

Continuous services are defined as 24 hours/day, 7 days/week.